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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,101	12/09/2003	Yoshinori Shizuno	OKI.630	2667
20987	7590 09/29/2004		EXAM	INER
VOLENTINE FRANCOS, & WHITT PLLC			WARREN, MATTHEW E	
ONE FREEDO	OM SQUARE			
11951 FREEDOM DRIVE SUITE 1260			ART UNIT	PAPER NUMBER
DESTON VA	20100		2015	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
	10/730,101	30,101 SHIZUNO	
Office Action Summary	Examiner	Art Unit	
	Matthew E Warren	2815	And
The MAILING DATE of this communication ap Period for Reply	pears on the cover she	et with the correspondence a	ddress
A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. If the period for reply specified above is less than thirty (30) days, a rep If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailine earned patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, m ly within the statutory minimum will apply and will expire SIX (6) e, cause the application to become	nay a reply be timely filed of thirty (30) days will be considered time MONTHS from the mailing date of this of me ABANDONED (35 U.S.C. § 133).	ely. communication.
Status			
1) ☐ Responsive to communication(s) filed on <u>09 L</u> 2a) ☐ This action is FINAL . 2b) ☐ This action is application is in condition for allowed closed in accordance with the practice under	s action is non-final. ince except for formal		e merits is
Disposition of Claims			
4) Claim(s) 1-12 is/are pending in the application 4a) Of the above claim(s) is/are withdra 5) Claim(s) is/are allowed. 6) Claim(s) 1-12 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/s	awn from consideration		
Application Papers			
9) The specification is objected to by the Examin 10) The drawing(s) filed on is/are: a) accomposition and accomposition and accomposition and accomposition and accomposition and accomposition are declaration in the Examination and accomposition are declaration in the Examination and accomposition are declaration as objected to by the Examination and accomposition are declaration as objected to by the Examination and accomposition are declaration as objected to by the Examination are declaration as objected to be a considered as objected as objected as objected to be a considered as objected as o	cepted or b)⊡ objecte e drawing(s) be held in ab ction is required if the dra	peyance. See 37 CFR 1.85(a). wing(s) is objected to. See 37 C	
Priority under 35 U.S.C. § 119			
a) △ All b) ☐ Some * c) ☐ None of: 1. △ Certified copies of the priority documer 2. ☐ Certified copies of the priority documer 3. ☐ Copies of the certified copies of the priority documer application from the International Burea * See the attached detailed Office action for a list	nts have been received nts have been received prity documents have b au (PCT Rule 17.2(a)).	l. I in Application No been received in this Nationa	ıl Stage
Attachment(s) 1) ☑ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☑ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08 Paper No(s)/Mail Date 12/9/03.	Pape	view Summary (PTO-413) er No(s)/Mail Date ee of Informal Patent Application (PT	ГО-152)

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DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohsumi et al. (US 6,303,470 B1).

In re claims 1, 5, and 9, Ohsumi et al. shows (figs. 2E and 13F) a semiconductor device comprising a substrate (202) which has a main surface formed with a circuit element (201); a wiring (12 in figs. 2C-2E) which is formed over the main surface and is electrically connected to the circuit element; a sealing resin (206) which covers the main surface of the substrate and the wiring; and an external terminal (14 in fig. 2E or 204 in fig. 13f) which is electrically connected to the wiring and which is exposed from a surface of the sealing resin, wherein an edge of the sealing resin is formed inside an edge of the substrate (see 206 left in fig. 13F).

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Claims 1, 4, 5, 8, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al. (US 2002/0025655 A1).

In re claims 1, 5, and 9, Satoh et al. shows (fig. 1) a semiconductor device comprising a substrate (1) which has a main surface formed with a circuit element (not shown); a wiring (4) which is formed over the main surface and is electrically connected to the circuit element (at pad 2); a sealing resin (5) which covers the main surface of the substrate and the wiring; and an external terminal (6) which is electrically connected to the wiring and which is exposed from a surface of the sealing resin, wherein an edge of the sealing resin is formed inside an edge 1(1) of the substrate.

In re claims 4, 8, and 12, Satoh discloses [0061] that the substrate is a silicon substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 6, 7, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (US 2002/0025655 A1) as applied to claims 1, 5, and 9 above, and further in view of cited case law.

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In re claims 2, 6, and 10, Satoh does not specifically disclose the limitations of the claims, however, such limitations are "Product by Process" claim limitations. A "product by process" claim limitation is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17(footnote 3). See also in re Brown, 173 USPQ 685: In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324: In re Avery, 186 USPQ 116 in re Wertheim, 191 USPQ 90 (209 USPQ 254 does not deal with this issue); and In re Marosi et al, 218 USPQ 289 final product per se which must be determined in a "product by, all of" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "product by process" claims or not. Note that Applicant has the burden of proof in such cases, as the above case law makes clear.

"Even though product-by- process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

In re claims 3, 7, and 11, Satoh dose not specifically show the seal layer positioned inside of the side surface within the desired range however, it would have been obvious to one of ordinary skill in the art to position the seal layer inside the side surface within the desired range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable

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ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.* Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the seal layer of Satoh by forming the seal layer inside of the side surface of a substrate in under 100 microns to form a package fulfilling a specific size requirement because Aller teaches that such a modification only involves routine skill in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ting (US 5,742,094) and Fukasawa et al. (US 6,657,282 B2) also show semiconductor devices having a sealing resin formed inside of a side surface of the substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEW

MEW September 27, 2004 TOM THOMAS SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2800